

MSG 233D - RED FD16 MEIDEX OPS

FD16 Operations Message

MX Playback: 14/20:02 – 14/20:30

MX XFERS: 14/22:50

MX PGSC SETUP (sts 5&6): 14/23:00

Standalone Door Ops: None

Digital TV Instructions: Live digital downlink on orbits 239 Dust and Sprite, and 240 Dust

- 1) The Blue and Red ops messages are divided into two parts, one for each shift. Please reference MSG 226 for the forecast and Yoya's message.
- 2) For error messages, select "OK" to ignore on MEIDEX PGSC (as many times as required). Notify MCC and perform MEIDEX PGSC Reboot per MSG 149.
- 3) We are getting close to the end of the flight, and also close to the end of our internal payload VCR recording capability, so we will be modifying our payload VCR philosophy as follows: we would like you to record only when you see a plume and for no more than 3 minutes per plume. If you see multiple plumes during a single observation, you may record each independently. If you see substantial dust activity, you are go to record for longer periods on MCC GO.
- 4) We have updated step 4 in the MEIDEX Science procedure for your two remaining Sprites. We will nominally be commanding this from the ground, however we have included the update in the event you are required to perform it. Please reference MSG 226 for the details of the step 4 update.

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Orbit # 239

Observation type: Dust (Atlantic)
 Dust plume width: 700 km, west of Africa
 Dust Plume Location: 2 dust plumes: 0N/30W and 5N/15W. No bias is required for this orbit.
 Airplane Support: No
 Video: Live Digital Downlink (14/20:58-14/21:12); Recorded on V10 #1 and #2
 Special Instructions: PLD VCR recording **ONLY** if dust is observed, **no more than 3 minutes per plume**, except on MCC GO.
 Violations: **RAM until 20:53**

Start	Procedure	Instructions	R/NR	CMD	Notes
14/20:10	MEIDEX SETUP	Step 4 (TLM Config)	REQ	POCC	
		Step 5 (Event Log Config)	REQ	POCC	
		Step 6 (PLD VCR Act.)	REQ	POCC	VCR = 1
		Step 7 (Sekai Activation)	REQ	POCC	
14/20:30	MEIDEX SETUP	Step 1 (Timer Setup)	REQ	Crew	
		Step 2 (PTV Check)	REQ	Crew	
		Step 3 (Tape Verification)	REQ	Crew	
14/20:30	XYBION ACTIVATION	Step 1 (Xybion Powerup)	REQ	POCC	
		Step 2 (Time/Date Config)	REQ	POCC	
14/20:35	MEIDEX SCIENCE	Step 4 (Xyb Cam Config)	REQ	POCC	Setup = ROI
		Step 6 (Truss Pntg Config)	REQ	POCC	Truss = 0
14/20:45	MEIDEX SCIENCE	Step 1 (Xyb Pwr Check)	REQ	Crew	
		Step 2 (Xyb T/D Check)	REQ	Crew	
		Step 3 (Door Open)	REQ	Crew	NET 14/20:53
		Step 4 (Xyb Cam Config)	NR	--	Already cmded
		Step 5 (Mon 2 Checks)	REQ	Crew	Setup = ROI
		Step 6 (Truss Pntg Config)	NR	--	Already cmded
		Step 7 (In Cabin Record)	REQ	Crew	Digital Dnlk
		Step 8 (PLD VCR act)	REQ	Crew	VCR = 1
14/21:02	T Time	Step 9 (Observation)	REQ	Crew	
14/21:12	MEIDEX SCIENCE	Step 10 (PLD VCR Stop)	REQ	Crew	NLT 14/21:13
		Step 11 (In Cabin Stop)	REQ	Crew	
		Step 12 (PTV PWRDN)	NR	--	
		Step 13 (Door Close)	REQ	Crew	NLT 14/21:16
		Step 14 (PLD VCR Swap)	NR	--	
		Step 15 (Status Check)	REQ	POCC	
		Step 16 (Truss Reconfig)	REQ	POCC	
14/21:15	MX CLOSEOUT	Step 1 (PLD VCR Deact)	REQ	POCC	

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Orbit # 239

Observation type: Sprite
Storm Center: 0N/160E. No attitude bias is required for this orbit
Video: Live Digital Downlink (KU avail 14/21:45 to 14/22:05), Recorded on V10 #1 and #2

Special Instructions: 1) Storms near the limb are preferable for pointing
2) Do not command gain to 90 until T Time.
3) Step 4 of science has been updated to reflect changes in the instrument configuration. This step will nominally be ground commanded; if you are required to take control, utilize the updated Step 4 from message 226.

Violations: Sun until 21:41 – Door will not be opened until T time

Start	Procedure	Instructions	R/NR	CMD	Notes
14/21:20	MEIDEX SCIENCE	Step 4 (Xyb Cam Config)	REQ	POCC	Setup = Sprite Gain = 65 EVA = 180
14/21:30	MEIDEX SCIENCE	Step 1 (Xyb Pwr Check)	REQ	Crew	
		Step 2 (Xyb T/D Check)	REQ	Crew	
		Step 3 (Door Open)	REQ	Crew	NET 21:41
		Step 4 (Xyb Cam Config)	NR	--	Already cmded
		Step 5 (Mon 2 Checks)	REQ	Crew	Setup = Sprite Gain = ~65
		Step 6 (Truss Pntg Config)	NR	--	Remain at 0 until T Time
		Step 7 (In Cabin Record)	REQ	Crew	Digital Downlink Do not start record until door is open.
		Step 8 (PLD VCR act)	NR	--	
14/21:41	T Time	Step 9 (Observation)	REQ	Crew	Open Door (St 3) Start Record (St 7) Cmd Gain to 90 (per updated Step 4) Maneuver truss as reqd to track storms near limb
14/22:04	MEIDEX SCIENCE	Step 10 (PLD VCR Stop)	NR	--	
		Step 11 (In Cabin Stop)	REQ	Crew	
		Step 12 (PTV PWRDN)	NR	--	
		Step 13 (Door Close)	NR	--	
		Step 14 (PLD VCR Swap)	NR	--	
		Step 15 (Status Check)	REQ	POCC	Cmd Gain to 65
		Step 16 (Truss Reconfig)	REQ	POCC	

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Orbit # 240

Observation type: Dust (Atlantic)
 Dust plume width: 700 km, stretching west of Africa.
 Dust Plume Location: 0N/30W. An attitude bias of 30 Deg N is required for this orbit
 Airplane Support: No
 Video: Live Digital Downlink (14/22:25-14/22:30); Recorded on V10 #1 and #2
 Special Instructions: PLD VCR recording **ONLY** if dust is observed, **no more than 3 minutes per plume**. VCR to be used will be voiced up prior to the observation.
 Violations: **RAM at 23:06**

Start	Procedure	Instructions	R/NR	CMD	Notes
14/22:10	MEIDEX SETUP	Step 6 (PLD VCR Act.)	REQ	POCC	
14/22:15	MEIDEX SCIENCE	Step 4 (Xyb Cam Config)	REQ	POCC	Setup = ROI
		Step 6 (Truss Pntg Config)	REQ	POCC	Truss = as reqd
14/22:25	MEIDEX SCIENCE	Step 1 (Xyb Pwr Check)	REQ	Crew	
		Step 2 (Xyb T/D Check)	REQ	Crew	
		Step 3 (Door Open)	NR	--	
		Step 4 (Xyb Cam Config)	NR	--	Already cmded
		Step 5 (Mon 2 Checks)	REQ	Crew	Setup = ROI
		Step 6 (Truss Pntg Config)	NR	--	Already cmded
		Step 7 (In Cabin Record)	REQ	Crew	Digital Dnlk
		Step 8 (PLD VCR act)	REQ	Crew	Check MCC for VCR
14/22:39	T Time	Step 9 (Observation)	REQ	Crew	
14/22:43	MEIDEX SCIENCE	Step 10 (PLD VCR Stop)	REQ	Crew	NLT 14/22:44
		Step 11 (In Cabin Stop)	REQ	Crew	
		Step 12 (PTV PWRDN)	REQ	Crew	
		Step 13 (Door Close)	REQ	Crew	NLT 14/23:04
		Step 14 (PLD VCR Swap)	NR	--	
		Step 15 (Status Check)	REQ	POCC	
		Step 16 (Truss Reconfig)	REQ	POCC	
14/22:45	MX CLOSEOUT	Steps 1-4	REQ	POCC	
14/22:50	MX CLOSEOUT	Step 5 (File Transfer)	REQ	Crew	
14/23:00	MX PGSC SETUP	Step 5 (MX TLM Config)	REQ	Crew	
		Step 6 (Event Log Config)	REQ	Crew	